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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

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Replacing GB/T 24430.2-2009

Test method for bunk bed structure safety

双层床结构安全试验方法

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Table of Contents

1 Scope	1
2 Normative reference documents	1
3 Terms and Definitions	1
4 General test conditions	1
4.1 Test tolerance	1
4.2 Initial preparation for test	1
5 Test equipment	2
5.1 General requirements	2
5.2 Measuring cone	2
5.3 Bed surface impactor	4
5.4 Loading Pad	4
5.5 Test cushion	5
5.6 Test load	5
5.7 Stop	5
5.8 Test ground (table) surface	6
5.9 Footboard impactor	6
5.10 V-shaped opening template	6
5.11 Foam board (sponge pad)	7
6 Test Step	7
6.1 Installation and inspection before test	7
6.2 Processing technology inspection	7
7 Test Report	15

Foreword

This document was issued on 7 September 2023 by the State Administration for Market Regulation; Standardization Administration of the PRC and takes effect on 1 April 2024.

It is a GB/T standard: recommended rather than compulsory, but it is the text a Chinese reviewer applies when assessing a submission.

It is classified under ICS 97.140, Chinese classification Y80.

It replaces GB/T 24430.2-2009, which is superseded.

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part 1. Structure and Drafting Rules of Standardization Documents"

Drafting.

This document replaces GB/T 24430.2-2009 "Safety of Household Bunk Beds Part 2. Testing" and is consistent with GB/T 24430.2-2009

In comparison, in addition to structural adjustments and editorial changes, the main technical changes are as follows.

- Changed the scope (see Chapter 1, Chapter 1 of the.2009 edition);
- Changed the normative reference documents (see Chapter 2, Chapter 2 of the.2009 edition);
- Added the specifications of the measuring cone head and its deviation requirements (see 5.2, 4.1 of the.2009 edition);
- Added opening measurement template (see 5.10);
- Added a rigid cylinder loading pad (see 5.4.2);
- Changed the regulations for test cushions (see 5.5, 4.4 of the.2009 edition);
- Changed the gap measurement method for holes, gaps and openings, and added all other holes, gaps and openings in the accessible area of the bunk bed
Detection of gaps (see 6.3, 5.3 of the.2009 edition);
- Changed the static load test method for safety barriers (see 6.4.2, 5.4.2 of the.2009 edition);
- Changed the vertical upward and downward static load test methods of the bed surface (see 6.4.3, 5.4.3 of the.2009 edition);
- Changed the durability test method of frames and fasteners (see 6.4.6, 5.5 of the.2009 edition);
- Added vertical static load test method for ladders and stair treads (see 6.4.7);
- Changed the horizontal static load test method for ladders (see 6.4.8, 5.6 of the.2009 edition);
- Added the durability test method for ladders and stair treads (see 6.4.9);
- Added stair safety guardrails and mechanical strength tests for entry and exit platforms (see 6.4.11);
- Deleted the inspection rules (see Chapter 6 of the.2009 edition);
- Deleted Appendix A (see Appendix A of the.2009 version).

Please note that some content in this document may be subject to patents. The publisher of this document assumes no responsibility for identifying patents.

This document is proposed by China Light Industry Federation.

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This document was drafted by. Shanghai Quality Supervision and Inspection Technology Research Institute, Zhejiang Light Industrial Products Quality Inspection Research Institute, Jiangxi Jinhu Bao

Insurance Equipment Group Co., Ltd., Kezhihua Inspection and Testing (Fujian) Co., Ltd., Dehua Bunny Decoration New Materials Co., Ltd., Anji Juran

Yazhu Household Products Co., Ltd., China Furniture Association, Shandong Guangming Yuandi Children's Furniture Technology Co., Ltd., Dongguan Jinhui Testing Equipment Manufacturing

Manufacturing Co., Ltd., Jiangxi Furniture Product Quality Supervision and Inspection Center, Aixue (Fujian) Technology Co., Ltd., National Furniture and Indoor Environmental Quality

Quality Supervision and Inspection Center, Guangdong Product Quality Supervision and Inspection Institute, Zhejiang A&F University, Shenzhen Institute of Metrology and Quality Inspection, Ningbo Yixiang

BLOW MOLDED FURNITURE LIMITED.

The main drafters of this document. Luo Jufen, Liu Chenguang, Zhong Wenhan, Qu Guangbing, Xiong Chunlin, Wang Xuefen, Sheng Shixiong, Cao Gang, Wang Xianrong, He Bing,

Lee Kuan Yew, Sun Shudong, Wang Hongqiang, Wu Haitao, Ye Qingyi, Ding Peng, Lin Jianhua, Jiang Yixiang, Shi Yachen.

The previous versions of this document and the documents it replaces are as follows.

---First published as GB/T 24430.2-2009 in.2009;

---This is the first revision.

Safety test method for bunk bed structure

1 Scope

GB/T 24430-2023 covers how the structure of a bunk bed is tested for safety - the conditions, the apparatus, the test sequence and the report - for assembled beds whose sleeping surface stands 600 mm or more above the floor. Clause 4 fixes the ground rules:

the tolerances that apply to the applied forces and to the dimensions, and the preparation of the bed before any load is put on it. Clause 5 describes the apparatus in detail, including the bed surface impactor, the loading pad, the test cushion and the test loads that work the bed the way an occupant would, the stops and the test floor or table surface that hold it while this happens, the footboard impactor, the foam board, and the gauges applied to the openings in the structure - a measuring cone and a V-shaped opening template. Clause 6 sets out installation and inspection before test and the check on manufacturing workmanship; clause 7 the report. A bunk bed fails in two ways that matter: a child's head or limb caught in a gap, and a joint or guardrail that gives way at height, so gaps and repeated loading are measured rather than judged by eye. Written for furniture makers, test laboratories and retail buyers.

This document describes the conditions, equipment, procedures and test reports for safety testing of bunk bed structures.

This document applies to well-installed beds with a bed surface height $\geq 600\text{mm}$ from the ground.

The loads and forces in the strength and durability tests specified in this document are applicable to beds with an internal length greater than 1400 mm and a small width.

Beds with a height of less than or equal to 1200mm.

This document does not apply to furniture (such as cabinets, tables, chairs, stools, etc.) below the bed with a height above the ground $\geq 600\text{mm}$.

2 Normative reference documents

The contents of the following documents constitute essential provisions of this document through normative references in the text. Among them, the dated quotations

For undated referenced documents, only the version corresponding to that date applies to this document; for undated referenced documents, the latest version (including all amendments) applies to

this document.

GB/T 10807-2006 Determination of hardness of flexible foam polymer materials (indentation method)

3 Terms and definitions

There are no terms or definitions to be defined in this document.

4 General test conditions

4.1 Test tolerances